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TAKAHASHI SHINJI****(54) AUSTENITIC STAINLESS STEEL FOR FORMING
PASSIVE FILM AND FORMATION OF PASSIVE
FILM****(57) Abstract**

PURPOSE: To provide an austenitic stainless steel for forming passive films; and a method for forming the passive films capable of surely forming the oxidation passive films essentially consisting of chromium oxide which does not contain an iron-component.

CONSTITUTION: The steel which is $3/4/100$ in the intensity ratio (i_2/i_1) of the intensity value (i_1) of the max. peak detected in a range from 42 to $<44^\circ$ of a diffraction angle 2θ ; of diffraction X-rays at the extreme surface and the intensity value (i_2) of the max. peak detected in a range from 44 to $<46^\circ$ is subjected to baking in an inert gas, by which moisture is removed from the surfaces of the stainless steel. This stainless steel is then subjected to a heat treatment at 300 to 600°C in a gaseous mixture atmosphere composed of the inert gas and 500ppb to 2% gaseous H_2O , by which the oxidation passive films essentially consisting of the chromium oxide which does not substantially contain the iron component are formed at least at 1.5nm from the extreme surface.

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